ABSTRACT OF THE DISCLOSURE

Disclosed is a channel allocation method in a CDMA communication system. The method comprises receiving from a UTRAN one SF node $C_{SF,k}$ out of 2^{m-1} SF nodes (where m is an integer larger than 3) arranged in the form of a tree having a mother node and child nodes; searching a group including the received SF node $C_{SF,k}$ in accordance with Formula (1) below; spreading a signal on a dedicated physical data channel (DPDCH) with an OVSF code corresponding to a selected one of the received SF node and its child nodes in the searched group; and spreading a signal on a dedicated physical control channel (DPCCH) with an OVSF code corresponding to an SF node determined by Formula (2) below based on the received SF node.

Formula (1)

$$\text{For } SF \le \frac{2^{m-1}}{4},\ (P_1 \cdot SF,\ P_1 \cdot k) = \left(\frac{2^{m-1}}{4}, n\right)$$

$$\text{For } SF > \frac{2^{m-1}}{4},\ \left(P_2 \cdot \frac{2^{m-1}}{4},\ P_2 \cdot n\right) = (SF, k)$$

where, $P_1 = \frac{2^{m-1}}{4 \cdot SF}$ and $P_2 = \frac{4 \cdot SF}{2^{m-1}}$.

Formula (2)

$$F(C_{\frac{2^{m-1}}{4},k}) = C_{2^{m-1},2^{m-1}-k-1} \quad (k = 0,1,\ldots)$$

$$F(C_{\frac{2^{m-1}}{4},k}) = C_{2^{m-1},2^{m-1}-(k-32)} \quad (k = 0,1,\ldots)$$